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14399-09

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March 13, 2006

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APPLICATION NUMBER: *60/643,661*
FILING DATE: *January 13, 2005*
RELATED PCT APPLICATION NUMBER: *PCT/US06/01027*

THE COUNTRY CODE AND NUMBER OF YOUR PRIORITY APPLICATION, TO BE USED FOR FILING ABROAD UNDER THE PARIS CONVENTION, IS *US60/643,661*

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No. ET 793408978 US

INVENTOR(S)

Given Name (first and middle [if any]	Family Name or Surname	Residence (City and either State or Foreign Country)
Charles N.	Santry	Natick, Massachusetts

Additional inventors are being named on the _____ *separately numbered sheets attached hereto*

TITLE OF THE INVENTION (500 characters max)

MULTI-VALVE FREEZE-PROOF DESIGN FOR SNOW MAKING

Direct all correspondence to: **CORRESPONDENCE ADDRESS**

[X] Customer Number: 45295

OR

[ ] Firm or Individual Name

Address

Address

City | State | Zip

Country | Telephone | Fax

ENCLOSED APPLICATION PARTS *(check all that apply)*

[X] Specification *Number of Pages* 1 [ ] CD(s), Number _____

[X] Drawing(s) *Number of Sheets* 3 [X] Other (specify) Cover Sheet

[ ] Application Data Sheet. See 37 CFR 1.76

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT

[X] Applicant claims small entity status. See 37 CFR 1.27.

[X] A check or money order is enclosed to cover the filing fees.

[ ] The Director is herby authorized to charge filing fees or credit any overpayment to Deposit Account Number: _____

[ ] Payment by credit card. Form PTO-2038 is attached.

FILING FEE Amount ($)

$100.00

The Invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

[X] No.

[ ] Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE Floyd B. Carothers

Date January 13, 2005

REGISTRATION NO. 24,252 *(if appropriate)*

Docket Number: 4418

TYPED or PRINTED NAME Floyd B. Carothers

TELEPHONE (412) 471-3575

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

Multi-Valve Freeze-Proof Design for Snowmaking

The following invention involves incorporating the internal components of a ball valve into a manifold attached to a snowgun in order to control water flow to the snowgun in a way that prevents the valve from freezing. Additionally, the design, by incorporating the components in a common manifold, reduces manufacturing costs and the overall size and weight of the snowgun.

One or multiple valves can be used in this configuration depending on the snowgun design. This concept can be used with internal or external mixing snowguns, ground/sled mounted or tower snowguns.

By burying the components of each valve into a manifold (part # 1) attached to the snowgun, all valve components are surrounded by moving water which is flowing through the snowgun while it is running. Water enters the manifold through a hose connection at A. All valve components are located in an open cavity within #1 through which all the water entering the snowgun must flow. The cavity is designed with enough room to allow this moving, relatively warm (above freezing) water to surround all the valve components and prevent these valve components from freezing whether the valves are in the open or closed positions. When a valve is turned on, water from the manifold travels up a separate chamber (#4) to feed additional nozzles at the snowgun head. When the valve is turned off, excess water left in this separate chamber drains out the drain port to prevent freezing of that separate chamber when not running.

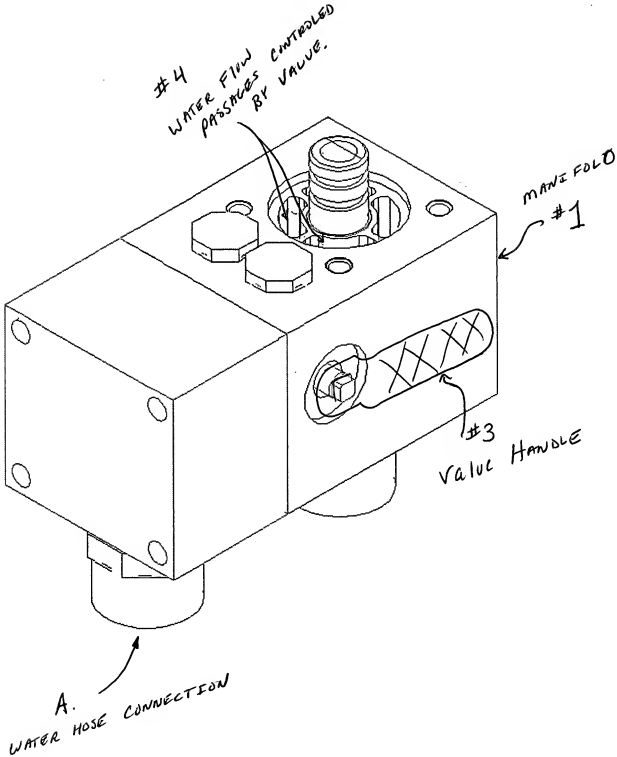
These separate chambers which feed additional nozzles can be a series of pipes or separate channels within a multi lumen custom extrusion.

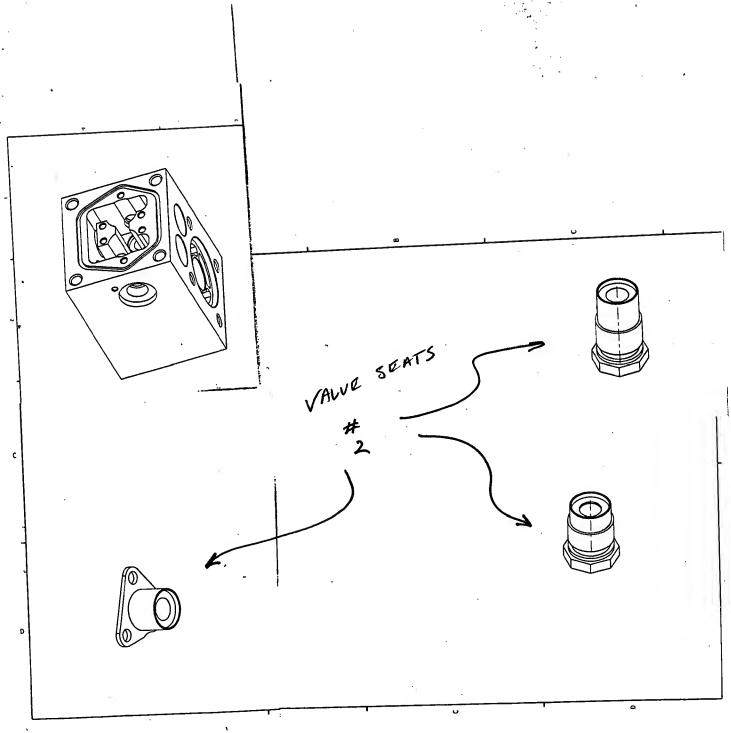
Valve seats for each of the valves are located in the manifold. Some are separate pieces threaded into place (part #2), others are machined into the base manifold. The ball is then located between the seats in the manifold. The stem which links to the ball extends out through the side of the manifold with a gland seal to prevent leakage. The valve can be manually activated by turning a valve handle (part #3) or automatically actuated by a mechanical actuator mounted on the manifold.

This manifold can be welded onto, or bolted onto, the snowgun.

Respectfully submitted by,

Charles N. Santry
President
Snow Economics, Inc.




VALVE SEATS
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